DOCUMENT RESUME

ED 037 993 EF 004 235

TITLE The Luminous Environment for Education. A Selected Bibliography.
INSTITUTION Wisconsin Univ., Madison. ERIC Clearinghouse on Educational Facilities.
PUB DATE May 70
CONTRACT OEC-1-7-070883-5095
NOTE 49p.

EDRS PRICE EDRS Price MF-$0.25 HC-$2.55
DESCRIPTORS *Bibliographies, Biology, Building Design, Classroom Design, *Design Needs, *Environmental Criteria, Interior Design, Lighting, *Lighting Design, Performance Specifications, Physical Design Needs, Physiology, Psychological Design Needs, Vision, *Visual Environment

ABSTRACT

This compilation is a survey of the literature pertinent to the design of lighting for educational facilities. The contents are selected to be an overview of the topic while maintaining a technical level comprehensible to the layman concerned with school planning and design. The general subject areas are--(1) the visual and lighted environment as it relates to educational facilities, (2) man's biological, psychological and physiological needs for light in the school environment, (3) the electrically lighted physical environment for educational facilities, (4) the lighting of audio-video facilities and auditoriums, (5) the provision of daylight for the school environment, and (6) applications of lighting design to educational facilities. (JD)

ED037993

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THE LUMINOUS ENVIRONMENT

FOR EDUCATION

A Selected Bibliography

May 1970

EF 004 235

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The work presented herein was performed pursuant to a contract with the U. S. Office of Education, Department of Health, Education, and Welfare (OEC-1-7-070883-5095).

ERIC CLEARINGHOUSE ON EDUCATIONAL FACILITIES
The University of Wisconsin
Madison, Wisconsin
May 1970

I N T R O D U C T I O N

This compilation is a survey of the literature pertinent to the design of lighting for educational facilities. The contents of the literature cited is selected to be an overview of the topic while maintaining a technical level comprehendible to those concerned with school planning and design but without the technical capabilities of the engineer or physicist.

The selection and identification of the literature is based on--(1) the pertinent subject content contained in the article or book, (2) quantity and quality of the information, and (3) notability of author or authors.

Each citation identified is followed by an alphabetical listing of descriptors which were selected to describe the subject elements of each document. Major descriptors are the most important descriptors assigned to a given document and are identified by an asterisk. The descriptors used throughout this bibliography are part of the Thesaurus of ERIC Descriptors, which is used for indexing, storing, and retrieving documents handled by the ERIC system.

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ILLUMINATING EDUCATIONAL FACILITIES

"Birth and Development of School Lighting," Illuminating Engineering, (Jan. 1956), 36-46.

*Classroom Environment; *Design Needs; *Lighting Design; *Lights; *Task Performance; Chalkboard; Contrast; Daylight; Glare; Health; Illumination Levels; Psychological Design Needs; Specifications

Boyd, R. A. "The Attainment of Quality Daylighting in School Classrooms," Illuminating Engineering, (Jan. 1953), 15-22.

*Daylight; *Glass Walls; *Interior Design; *Research; *Visual Environment; Classroom Design; Illumination Levels; Measurement; Solar Radiation

Burnham, R. D. "New Lighting Concepts for New Schools," American School Board Journal, (Dec. 1956), 31-32.

*Classroom Environment; *Color; *Design Needs; *Interior Design; *Lighting; Architecture; Classrooms; Color Planning; Environmental Criteria; Lighting Design; Lights; Psychological Design Needs; Solar Radiation; Task Performance; Thermal Environment

Clapp, Wilfred F.; And Others. "School Lighting Principles Applied to Design, Renovation, Maintenance," Nation's Schools, 66 (Sept. 1960), 75-101.

*Classroom Environment; *Environmental Research; *Lighting; *Performance Specifications; *Visual Environment; Classroom Design; Daylight; Design; Electrical Systems; Glare; Maintenance; Task Performance; Vision; Visual Acuity

"Colour in School Buildings," Building Bulletin # 9, England: Ministry of Education. June 1962, 68 pp.

*Design; *Environmental Criteria; *Illumination; *Vision; Building Design; Illumination Levels; Lighting; School Design

"Electricity for Schools and Colleges," American School and University, 37 (Jan. 1965).

*College Buildings; *Controlled Environment; *Electrical Systems; *Heating; *Lighting; Air Conditioning; Automation; Classroom Design; Computers; Electrical Appliances; Electronic Controls; Environmental Criteria; Food Service; Parking Areas; Playgrounds; School Design; Theaters

Gibson, Charles D.; And Others. "School Environment Symposium," Illuminating Engineering, (April 1962), 299-326.

*Lighting; *School Environment; *Visual Environment; Administrator Problems; Classroom Design; Costs; Flexible Lighting Design; Television Lighting

Guide for the Evaluation of School Facilities. California Association of Public School Business Officials, April 1966. 64 pp.

*Environmental Influences; *Evaluation Methods; *Facility Guidelines; *Physical Environment; *School Construction; Acoustical Environment; Audiovisual Aids; Equipment; Heating; Maintenance; Safety; School Buildings; School Planning; Spatial Relationship; Visual Environment

"How Gibson's Wheel Measures Light," The Nation's Schools, 74 (Oct. 1964), 55-57.

*Administrator Responsibility; *Design Needs; *Environmental Influences; *Evaluation Techniques; *Performance Criteria; Economics; Illumination Levels; Interior Space; Lighting; Maintenance

"How to Rate Your School Lighting," The Nation's Schools, 74 (Oct. 1964), 53-54.

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Illuminating Engineering Society. "New Standards for School Lighting," Catholic School Journal, (Nov. 1962), 67-69.

*Design Requirements; *Lighting; *Lighting Design; *Schools; *Standards; Contrasts; Daylight; Glare; Illumination Levels; Task Performance; Visual Environment

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*Design Needs; *Equipment; *Lighting; *Lighting Design; *School Design; Contrasts; Daylight; Equipment; Glare; Illumination Levels; Requirements; Task Performance; Vision

Larson, Leslie. Lighting and Its Design. New York: Whitney Library of Design, a Division of Whitney Publications, Inc., 1964. 228 pp.

*Architecture; *Illumination Levels; *Lighting; *Lighting Design; *Vision; Lights; Photographs

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*Classroom Design; *Lighting; *School Environment; *Standards; *Visual Environment; Design Needs; Economics; Maintenance

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*Educational Environment; *Lighting; *Lighting Design; *Performance Specifications; *Vision; Classroom Environment; Daylight; Environmental Criteria; Environmental Influences; Illumination Levels; Solar Radiation

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*Educational Facilities; *Educational Planning; *School Location; Controlled Environment; Environmental Influences; Equipment; Planning; Programing; Resources; Sonic Environment; Thermal Environment; Visual Environment

Neidhart, John J. "Meeting Quality Requirements in School Classrooms," Illuminating Engineering, (June 1953), 311-315.

*Chalkboards; *Classroom Design; *Lighting; *Visual Performance; Color; Contrasts; Equipment; Illumination Levels; Lighting Design

"New Lighting Schemes for Integrated Designs," American School and University, 40 (Jan. 1968), 44-46.

*Component Building Systems; *Educational Facilities; *Glare; *Illumination Levels; *Lighting; Air Conditioning; Ceilings; Flexible Lighting Design; Visual Perception

Phillips, Derek. Lighting in Architectural Design. New York: McGraw-Hill Book Company, 1964. 310 pp.

*Architecture; *Illumination Levels; *Lighting;

*Performance Specifications; Component Building Systems; Controlled Environment; Cost Effectiveness; Daylight; Environmental Criteria; Facility Requirements; Glare; Interior Design; Lights; Maintenance; Physics; Physiological Design Needs; Psychological Design Needs; Safety; Vision; Visual Environment

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Reida, George W. Artificial Lighting for Modern Schools, A Guide for Administrative Use. Topeka, Kansas: State Department of Public Instruction, 1960. 52 pp.

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School Lighting. Cleveland, Ohio: General Electric, 1964. 16 pp.

*Economics; *Illumination Levels; *Lighting; *School Environment; *Visual Environment; Athletics; Auditoriums; Audiovisual Aids; Classrooms; Corridors; Multipurpose Classrooms; Safety; Television

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*Auditoriums; *Innovation; *Lighting; *Maintenance; *Windowless Rooms

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Seagers, Paul W. "Developing Color Treatment for School Rooms," Illuminating Engineering, (June 1953), 296-298.

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The Effect of Windowless Classrooms on Elementary School Children. Ann Arbor, Mich.: Michigan University, Architecture Research Laboratory, Department of Architecture, 1965. 103 pp.

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*Classroom Design; *Classroom Research; *Health Needs; *Physical Environment; *Visual Environment; Field Studies; Furniture Arrangement; Furniture Design; Human Factors; Human Posture; Lighting Design; Physical Design Needs; Psychological Affects; Task Performance; Vision

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*Human Factors; *Physical Environment; *Task Performance; *Visual Perception; Contrast; Environmental Research; Glare; Illumination Levels; Visual Acuity; Visual Discrimination; Visual Environment

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*Environmental Influences; *Health Needs; *Lighting; *Vision; *Visual Environment; Color; Eyes; Glare; Human Resources; Illumination Levels; Performance Specifications; Physiological Design Needs; Psychological Design Needs; Safety

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*Biological Influences; *Environmental Influences; *Human Development; *Lighting; *Research; Design; Light; Performance

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*Chalkboards; *Lighting Design; Classroom Design; Design Needs; Illumination Levels; Instructional Materials; Visual Discrimination

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*Classroom Design; *Environmental Research; *Lighting; *Visual Environment; Contrast; Chalkboards; Glare; Illumination Levels; Interior Design; Physical Design Needs

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*Applied Research; *Glare; *Light; *Task Performance; *Visual Perception

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